

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated January 8, 2004. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 1-14 are under consideration in this application. Claims 1-3 and 5-6 are being amended, as set forth in the above marked-up presentation of the claim amendments, in order to more particularly define and distinctly claim applicants' invention. New claims 8-14 are being added to recite other embodiments described in the specification.

Additional Amendments

The claims are being amended to correct formal errors and/or to better recite or describe the features of the present invention as claimed. All the amendments to the claims are supported by the specification. In particular, the new claims 8-14 are paraphrased on pages 9-12 of the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Formality Rejection

Claims 1-3 and 5 were objected to due to various informalities, and claim 6 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Further, claims 1 and 3-5 were rejected under 35 U.S.C. § 101 due to the claiming of non-statutory subject matter. As indicated, the claims have been amended as required by the Examiner. Accordingly, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

Prior Art Rejection

Claim 1 was recited under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,263,350 to Wollrath et al. (hereinafter "Wollrath") and in view of U.S. Pat. No. 6,427,152 to Mummert et al. (hereinafter "Mummert"), claims 2-6 were recited as being unpatentable over Wollrath in view of Mummert and further in view of U.S. Pat. No. 5,410,598 to Shear

(hereinafter “Shear”), and claim 7 was rejected as being unpatentable over Wollrath in view of Mummert and Shear and further in view of U.S. Pat. No. 5,276,867 to Kenley et al. (hereinafter “Kenley”). The prior art references of Warr (5,131,087), Schmuck et al. (5,940,838), McCarty et al. (5,946,660), Kriegsman (6,370,580), MacFarlane et al. (6,516,348) and Akiyama et al. (JP 03280652 A) were cited as being pertinent to the present application. These rejections have been carefully considered, but are most respectfully traversed, as more fully discussed below.

A service method of a rental storage of the present invention, as now recited in claim 1, in which a rental storage user uses the rental storage provided by a storage provider or a network and said rental storage user and said storage provider communicate with respect to rental storage service, comprises: using storage of said storage provider by the rental storage user; providing by the storage provider estimation of data amount in the rental storage for future storage usage of said rental storage user, based on the history of storage usage of said rental storage user; and reporting the estimation to said storage user.

The invention is also directed to another service method of a rental storage recited in claim 2, similar to that recited in claim 1, but further comprising: making a contract between said rental storage service provider and said rental storage service user so as to configure contract options based on the contract of use of storage service; reporting charge to the rental storage service user by the rental storage service provider; paying the charge for the use of said storage by the rental storage service user to the rental storage service provider; reporting the history of storage usage record; and reconfiguring said contract options by said rental storage service provider.

The invention is also directed to another service method of a rental storage recited in claim 3, similar to that recited in claim 1, but further comprising: when said rental storage service provider and said rental storage service user make a contract and the contract options based on the contract of use of said storage specifies a charge system for contracted amount of data according to predetermined usage; and proposing to said rental storage service user a recommended contract on an amount of data according to the estimation.

The invention is also directed to a rental storage service system, as now recited in claim 8, in which the rental storage service users uses the rental storage provided by the rental storage service provider through the network and the rental storage service provider communicate with respect to rental storage service, the system comprising: a user information processing unit for configuring the information of the rental storage service user; a data aggregation unit for

aggregating data storage usage of the rental storage by the rental storage service user; a usage estimation unit for estimating future data storage usage by the rental storage service user; a billing unit for billing the data storage usage to the rental storage service user; a reporting unit for reporting any necessary information to the rental storage service user; and a data access processing unit for storage data access. The user information processing unit records configuration of the information of the rental storage service user into a user management file. The data aggregation unit records history of data storage usage of the rental storage by the rental storage service user in a data record file. The usage estimation unit records estimated future data storage usage into a data estimation file, and the data access processing unit records data access information of the rental storage.

Applicant respectfully submits that none of the cited prior art references discloses, teaches or suggests that “a rental storage service provider estimates data amount in a rental storage for future storage usage of a rental storage *user* based on the history of storage usage of the rental storage user” to optimize the *users*’ rental storage usage corresponding to contract options and billing charges thereby reducing the users’ cost (p. 60, lines 11-14), according to the invention.

In contrast, Wollrath only discloses a system that a server grants a lease period for clients. The server merely grants and determines a lease period automatically for the clients that request to the server. As admitted by the Examiner (p. 7, third paragraph of the outstanding Office Action), Wollrath does not disclose a rental storage method or system for users which estimates amount of data usage and reports to the users as this invention.

Mummert was relied upon by the Examiner to teach “providing by the storage provider estimation of future storage usage of said rental storage user, based on the history of storage usage of said rental storage user.” However, contrary to the Examiner’ assertion, Mummert combines object histories “*to create a history of the utilization of the container as if it had, in the past, only held the current inventory of objects. In this way, the errors inherent from the previous addition and deletion of objects is eliminated. ... The combination of the combining of histories and the added length of the histories may result in more accurate projections of future utilization of the container. More accurate projections allow for the more accurate management of storage environments* (col. 4, lines 10-20). “ In short, Mummert predicts future utilization of the physical *storage container (hardware, i.e., storage resources in a computer system; Abstract)*, rather than future storage usage of said *rental storage user (legal entities, e.g.,*

persons, corporations with capacity to make contracts).

Neither does Mummert calculate or provide **data amount** in the rental storage for future storage usage of rental storage **users** based, or the history of storage usage of the **users**, or reporting to the **users** estimation of data amount in the rental storage for the **users'** future storage usage.

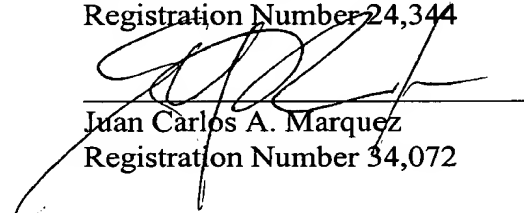
None of the cited references compensate for such deficiencies.

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed in independent claims 1-3 and 8 and the prior art references upon which the rejections in the Office Action rely, Applicant respectfully contends that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and phone number indicated below.

Respectfully submitted,

Stanley P. Fisher
Registration Number 24,344



Juan Carlos A. Marquez
Registration Number 34,072

REED SMITH LLP
3110 Fairview Park Drive, Suite 1400
Falls Church, Virginia 22042
(703) 641-4200

April 7, 2004

SPF/JCM/JT